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ABSTRACT

The impact on education of the near full employment in Massachusetts is analyzed. The document covers such probable impact areas as effects of the shortage on various job categories in school systems, characteristics of applicants, hiring strategies, and future plans. Data were gathered from telephone interviews with school system representatives from the north shore region of Boston. The results indicate that few problems exist in finding qualified people for positions in the school systems in this area, with a few notable exceptions. The impact has been described as more attributable to a combination of factors than to the Massachusetts employment picture alone. Appended are 53 references. (SI)

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THE IMPACT OF FULL EMPLOYMENT ON EDUCATION

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ABSTRACT

While the near full employment situation in Massachusetts has received much media coverage and political attention, analysis of its impact on education, a field projected to be responsible for increased hiring activity in the near future, and an area already cited as having shortages in some areas, has been limited.

This paper is an initial step in such an analysis. It covers such probable impact areas as: affects of the shortage on various job categories in school systems, characteristics of applicants, hiring strategies and future plans, by summarizing the results of telephone interviews with school system representatives from the north shore region of Boston, Massachusetts.

The results indicate that few problems exist in finding qualified people for positions in the school systems in this area, with a few notable exceptions. What impact has been described in more attributable to a combination of factors than to the Massachusetts employment picture alone.

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INTRODUCTION

Given the national demographics, labor shortages seemed inevitable some time ago, but until recently few employers viewed the dwindling supply of young people in the civilian labor force with any great apprehension. The Bureau of Labor Statistics' projections: that the work force will be expanding by only 1% annually through the year 2000, one of the lowest annual rates in the nation's history; that the average age of workers will climb to 39 years from the present 35 (Labor Supply in Upheaval,1987; Simerad, 1987); that by 1990 there will be 11% fewer workers aged 16 through 24 than there were in 1984, and that from 1990 to 1995 that group is expected to drop by an additional 1.1 million, represent a dramatic shift in the generally stable world of population statistics. This shift happens to be occurring just when an expansion in the economy, and particularly in the service industries, is taking place (Fever,1987). The Bureau of Labor Statistics estimates that, assuming moderate growth, the number of jobs created between 1984 and 1990 will be a million higher than the number of people added to the work force (Brannigan,1986).

While the national unemployment figures are still above the 4% full employment level that economic theory traditionally has said should begin to trigger shortages, closer scrutiny shows some areas where cause for concern might be concentrated. In particular, the unemployment rate for managers and professionals is 2.4%, and for executives and administrators it is 2.6%. And the unemployment levels have dropped below the 4% mark in 31 major metropolitan areas in 19 states (Bernstein,1987).

If the trend continues then industries in which job creation is occurring will be those most likely to be affected by the projected labor shortages. Projections are that most of the teachers who will be teaching in 1995 have not yet been hired; an estimated 1.4 to 2 million new teachers will be needed to meet the growing demand created by increasing student enrollments, teacher turnover and retirements. (NCES,1984; Oregon School Study Committee,1986; Wise, Darling-Hammond and Berry,1988; Office of Research and Improvement, 1986). Teaching is cited as being one of the 10 areas expected to have the most growth in new jobs by 1995.

Studies on Teacher Supply and Demand

Development of such projections and the bases upon which they have been developed, have been debated on their relative merits and have themselves been the focus of much research activity (Berryman, 1985; Caffarella,1987; Committee on National Statistics,1985; Raizen, 1986). The major criticisms are: lack of

breakdowns by levels, fields, geographical regions, and racial and ethnic characteristics; inconsistency in sampling frames, questions, and time periods; projections based on past trends and assumptions; and the need to address the issue as a dynamic human resourse system that reflects changes in educational services (e.g. special education), educational practices (e.g. class size), and financial constraints (Primary and Secondary Teaching Staff Demand, 1986; Office of Research and Improvement, 1986; Barryman, 1985; Caffarella, 1987; Committee on National Statistics, 1985; Intergovernmental Advisory Council on Education, 1985; Raizen, 1986). Groups such as the National Research Council's Committee of National Statistics, the Institute for Educational Leadership , and the Center for Statistics have initiated studies to determine what data is needed and how it might best be collected (Office of Research and Improvement, 1986). For the present we must rely on synthesizing information from a number of sources and identifying the more obvious trends.

One of the patterns that is apparent in many of the studies is for the teacher shortages to appear first in the math and science fields (National Commission, 1983; NCES, 1983; Dunlop, 1986; Aiken, 1985,1986). Other places which show shortages are special education, and bilingual and foreign language (Dunlop, 1986; Aiken,1986). In the Northeast the shortages were found in Industrial Arts, Mathematics, Chemistry, Physics, Data Processing, Speech pathology, Computer Science and Bilingual Education (Aiken, 1986). These shortfalls are expected to expand to more generalized conditions given projections of enrollment growth, expanded curriculum demands of a high tech economy, attrition and the end of school employment hegemony of the female labor force (Darling-Hammond, 1984; Bird, 1985).

While quantitaive issues (assuring an adequate supply of teachers) have received a great deal of attention, the concern for quality has also been addressed. Particular attention has been given to the reported decline in, or low levels of, academic ability among teachers (Weaver, 1983; Darling-Hammond, 1984; Schlechty and Vance, 1981,1982, 1983). Questions have also been raised about the types of measures that might be taken to offset shortages, such as emergency certification, out of field placement and increases in class size (Spillane,1986; Dunlap, 1986). Recent reform efforts for the public school systems have called for both an adequate supply and a highly motivated, competent and effective group of teachers. (National Commission, 1983, Carnegie Foundation, 1984). Strategies recommended to address these needs include pay increases, career ladder and merit pay incentive systems, teacher competency testing, and various revisions of teacher training and certification programs. But the overlap of quality and quantity issues in the literature on school improvement is not a new occurrance. Educational labor market crises and the reform movements have been linked throughout this century and some feel that the present reforms strategies need to be reviewed within a historical context (Weaver, 1983,1979, Freiburg, 1985) and studied on their relative worth before full scale programs are enacted.

Some of the reasons given for the declining appeal of teaching to new labor entrants have also been analyzed, and give an additional dimension to the studies dealing with quantity and with quality, as well as to the recommendations for educational improvement. Pay issues are cited as primary reasons in a number of studies (The National Commission, 1983, Weaver, 1984, Schachly and Joslin, 1984 ; Berry,1984), while working conditions, initial teaching experience and placement problems, state certification and licensing policies, curriculum processes, lack of social prestige for the occupation, lack of administrative and parental support, lack of a clear school mission, and lack of personal autonomy were noted as factors in others (McLaughlin, 1986; Wise, 1988; Spillane, 1986; Berry,1985; Haskvitz, 1987;Council of Chief State Officers, 1984, Schlechtly and Vance 1981, Lortie, 1975).

Teachers that leave the professon are profiled as having between 5-7 years in teaching, above average to average teaching ability, the average age of 25-34, analytical skills and non-elementary placement, as well as problems in the previously mentioned areas (Haskvitz, 1987). Those that stay do so because of a committment to children and/or to a life-style, or an unwillingness to move to business or industry (Berry, 1985). They are most likely to be female and the second earner in the household, and not to be risk takers (Douglas and Bird, 1985). Those that stay may also be dissatisfied with many of the conditions that cause people to leave or not to enter the profession. Their dissatisfaction may perpetuate the situation because rather than being role models that encourage students to become teachers, they may be projecting their regret of their choice to their students and may "recruit them away from teaching" (Berry, 1985; Douglas and Bird, 1985; Bird, 1985).

Steps that have been suggested to address these issues include: local level as well as area, state and national discussions of the quantity/quality issues and the trade offs that are "acceptable; knowledge of and sensitivity to labor market forces indigenous to the locale; attention to the school milieu which presently frustrates or angers teachers; and flexibility in personnel policies on hiring and recruiting (Dunlap, 1986; Berry, 1985).

Labor Shortages in Massachusetts

According to most forecasts, the economic prosperity that Massachusetts has been enjoying should continue at least through 1988 and Massachusetts should outperform the country once again. Massachusetts has benefitted greatly from the economic expansion following the national economic recession of 1981-1982 and in the past five years nearly 400,000 jobs have been created. However, worker shortages are now being felt in many occupations and industrial sectors of the state's economy, and the projections for the future in this area do not look good. Between 1982 and 1985 the total of wage and salary workers in Massachusetts expanded at a pace over 25% more rapidly than in the United States as a whole. During that time period the civilian labor force in Massachusetts grew at less than one-half of the rate

of the United States' labor force (Sum, 1986).

A1987 unemployment rate of 3.2% and the bidding up of wages relative to those elsewhere is expected to act as a brake on the economy in 1988. Only 11,000 new jobs are projected for next year, far below the growth in recent years (Stein,1988). And the shortage of labor in Massachusetts will be aggravated by the 75% of the local economy concentrated in services (Warsh, 1988).

In the technology/information/service age that we are now in, needed skills will go beyond the basics (Ed Commission of the States, 1983) and human resources will be the most important factor in society; information will be second (Daggett and Brannigan, 1987). The tenuous conditions of the human capital pool, writes David Knapp of the Boston Globe, jeopordizes New England's future. We are running out of young people with the skills needed to make a knowledge-based economy work. This drain on the labor pool will create new demands on those who are developing our youth and their skills just as the competition for their services is highest.

Teacher Labor Force In Massachusetts*

Although the supply of teachers in Massachusetts is adequate at present, and projected to remain that way through 1991, a shortfall is then expected. Contributing to this will be the increasing student enrollment forecasted for the years 1991 through 1995. Primary grade enrollment bottomed out in 1975 and have been increasing since then. The increases there however have been offset by decreases in secondary enrollments which will not reach their minimums until 1991. After that total enrollments are expected to rise. This climb will occur at the time of the largest dip in college enrollment, and presumably the smallest number of young people enrolled in teacher training programs.

An aging workforce also impacts the situation. The average age of the teaching workforce increased from 36 years in 1973 to 42, eight years later. This represents a greatly accelerated aging process relative to the workforce as a whole, and represents a 91.5% decline in the youngest cohort aged 20-24, and an 83.7% decline in the number aged 25-29. One of the prime factors behind this phenomonon was Proposition 2 1/2. Although it has probably had the effect of shielding the state from major shortage felt in other areas of the country by increasing the reserve pool, it may also exacerbate expected shortages in the 1990's. The clustering of the workforce at the middle and upper end of the age scale means that the workforce will experience significant attrition due to retirement over the next few decades.

Overall figures, of course, tell only part of the story. Analysis by certification category, show that spot shortages already exist in the bilingual area. They are projected for English, the sciences, mathematics and vocational studies by the early 1990's, but not for early childhood, elementary, or the middle school grades. Other influences on the supply and demand of teachers also exist. They include wage

rates relative to rates being paid in other professions or jobs, geographical analyses, quality concerns, and planning activities. The major state assesment found important data unavailable and consequently many basic questions were left unanswered (*MISER, 1987).

RESEARCH METHODOLOGY

The purpose of this study was to determine the impact of the near full employment situation in Massachusetts on education. The major questions of the study were: is there a shortage of school personnel? if so, in which areas? is the supply of available candidates decreasing? again, if so, in which areas? does it take longer to fill positions in the present labor situation? are the candidates' qualifications declining? have any changes taken place in recruiting strategies? have any educational programs been affected? The study was designed to assess the employment situation, and its impact on the school systems, not just for teaching positions but for all school personnel. It was also focused on a relatively small geographical location so that local conditions could be examined and compared directly to conditions in the business sector in this area.

The study was conducted by telephone interviewing. An interview schedule was developed which directly addressed the questions listed above, as well as allowing for comments, opinions and annecdotal reports. The interview schedule was pilot tested with two communities outside of the geographical location targeted. Fourteen communities along the north shoreline of Boston were targeted for inclusion in the study. Information was obtained from eleven of those communities. In some cases the assessments for a single community were gathered from a number of sources. The interviews all took place during March and April of this year. Results were summarized and reported using descriptive measures and commentary.

FINDINGS

Overall the respondents did not seem to be experiencing severe shortages of school personnel, nor did they seem to be pessimistic about the immediate hiring prospects. This seems to be consistent with both general findings on the supply of teachers in Massachusetts and on the attitudes of small business persons in the area under study (MISER, 1987; Haran, 1988).

All of the communities involved in this study are, however, experiencing some labor shortages in their school systems in one form or another. The major problems are occurring for positions as substitute teachers, where 82% are experienceing some difficulty in finding personnel; special education, 55%; cafeteria workers, with 36% having problems there, teacher aides 27%; custodial, 27%; and certain high school subject areas,--industrial arts, foreign languages and math and science, 27%. For communities which have a need for bilingual education the shortage is particularly acute.

In terms of quantity, elementary and early childhood teachers, high school teachers in most subject areas, counselors and school psychologists, secretaries and school nurses seem to be in good supply. Some administrative, library, and ancillary service positions such as van or food truck drivers are problematic in a few of the communities.

The large majority of interviewees also reported that the labor supply situation has not impacted hiring either by increasing the time it takes to hire personnel or by decreasing the pool of available candidates. Some reported that while the numbers of applicants overall had decreased so had the number of open positions thus keeping the ratios fairly consistent. The exceptions to this were in the bilingual areas and the lower paying positions (e.g. maintenance and cafeteria workers) which were reported to take longer to fill and have fewer applicants from which to choose. Another exception was the decrease reported in the number of applicants for library positions, particularly for media specialists. One representative noted that although numbers of applications had decreased only slightly, he had seen an increase in the unavailability of applicants once they were selected. He attributed it to the low pay scale in his community.

When the issue of quality was addressed opinions varied, although the general assessment was positive. Of those that expressed an opinion about the quality of classroom teachers, the majority, 57%, felt that it was improved, 29% felt that it was the same and only 14% felt it had declined, but only slightly, by having good teachers leave the field. Quality problems were noted in the bilingual area where it was reiterated that the supply of quality personnel was quite low. Other problem areas were custodial help were it appears many of the "extras" --knowledge of electrical systems and boilers--, are missing, and secretarial support. A number of interviewees mentioned the poor pay scale as contributing to the quality problems with support personnel and one cited it as a factor in the hiring of quality administrators as well.

These results are in sharp contrast to the situation that local businesses found themselves in where 52% found candidates to be less qualified and 71% reported that it took them longer to fill positions in the present employment situation. Because of that most (54%) were spending more money and effort on recruiting. Seventy three percent (73%) had raised their pay schedules, 56% had used alternative strategies in searching for candidates, 43% had added benefits and 20% had targeted alternative labor pools. (Haran,1988).

The school systems are not experiencing that level of difficulty in attracting personnel and consequently have done little to alter their recruiting strategies. Most communities simply advertise locally and in the Globe, although two communities have experimented with alternative advertising media, such as television, and out of area or minority papers, and two of the communities have begun

active recruiting at job fairs. The largest response to the problem of attracting candidates, 55%, has been to increase pay. This has been used to keep competitive with surrounding communities and to address specific problem, or potential problem, areas with substitutes, aides, cafeteria workers, and custodians.
In addition to increasing pay for substitutes, two communities have added stability to the position and two other communities have targeted non traditional sources to address their need. Benefits have not been altered to any great extent to deal with any of the shortage problems. There are, however, a few communities which have begun to consider options in this area since as one administrator put it, "you just can't keep raising the pay; its not fiscally responsible."

Only one of the representatives felt that the quality of basic or supplemental programs had been affected by labor shortages, per se, although for students in need of bilingual education the shortage of teachers has certainly had its impact. The one exception was attributed to the increase in class size which, he explained, was an interaction effect of the labor situation, mandated programs, and a spending cap. In that vein, a number of administrators thought that whatever negative effects would be forthcoming would be attributable to Proposition 2 1/2 and the layoffs and cutbacks it will cause. In fact, continued layoffs were cited by a number of administrators as proof that teacher shortages would not be problematic. Those administrators that did see future problems, 45%, were concerned about the advancing age of the teaching population, the large number of projected retirees, and an applicant pool that was also aging. The economy, global circumstances, technology and the training of teachers were all cited as factors to be considered when assessing the long term effects.

SUMMARY AND CONCLUSIONS

It does not appear that the labor situation in Massachusetts has had a major impact on the school systems on the north shore of Boston. Some perceived shortages do exist, for instance in special education, and for teacher aides, cafeteria workers, custodians, and in a few isolated cases for subject teachers, such as industrial arts, but they are not widespread. The only exceptions are the lack of substitute teachers, and the need for qualified bilingual teachers, which exists in all communities needing these services.

Sufficient quantities of candidates appear to be available, with the abovementioned exceptions, and the time it takes to fill positions has not, in the opinion of those interviewed, increased. It is not surprising then that strategies in hiring and/or recruiting have not changed much, although many communities have, for a number of reasons, raised their pay scales.

Subjective assessments of quality issues also indicates that, in general, little change has been noted, either in personnel or in programs. The bilingual area was again the exception.

These results indicate that education has been less vulnerable to the effects of the labor situation in Massachusetts than small businesses in this area. And since even the local business people who have been experiencing shortages are optimistic about their potential for growth, it should not be surprising that local administrators are not overly concerned about forecasts for the future. However, small businesses are also noted for their high rate of "failure", a condition we ought not tolerate in the field of education. More attention to the quality/quantity issues, to the school milieu and to the hiring and recruiting policies (Dunlap, 1986; Berry,1985) although perhaps not necessary at this point, may indeed be desirable.

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